

**STATE OF MAINE**

**DEPARTMENT OF MARINE RESOURCES**

<b>IN THE MATTER OF THE APPLICATION OF TRUMPET ) ISLAND SALMON FARM FOR AN AQUACULTURE ) LEASE LOCATED EAST OF HARDWOOD ISLAND IN ) BLUE HILL BAY, TREMONT, HANCOCK COUNTY, ) MAINE )</b>	<b>FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION</b>
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On November 8, 2002 Trumpet Island Salmon Farm of Mount Desert, Maine applied for an aquaculture lease totaling 17.5 acres in the coastal waters of the State of Maine, located east of Hardwood Island in Blue Hill Bay in Tremont, Hancock County, Maine. The applicant requested the lease for a term of ten (10) years for the purpose of cultivating Atlantic salmon (*Salmo salar*) using net pen culture techniques. The application was accepted as complete on November 22, 2002. Public hearings on this application were held on August 5, 2003 in Bass Harbor, August 6, 2003 in Southwest Harbor, and January 12, 2004 in Tremont. Intervenor status was granted to Friends of Blue Hill Bay (hereafter referred to as FOBHB), represented by Sean Mahoney, Conservation Law Foundation (hereafter referred to as CLF), represented by Roger Fleming, and Eliot and Linda Paine.

Approval of aquaculture leases is governed by 12 M.R.S.A. §6072. This statute provides that a lease may be granted by the Commissioner of the Department of Marine Resources (DMR) if it is determined that the project will not unreasonably interfere with the ingress and egress of riparian owners; navigation; fishing or other uses of the area, taking into consideration the number and density of aquaculture leases; significant wildlife habitat and marine habitat or the ability of the site and surrounding marine and upland areas to support ecologically significant flora and fauna; or the use or enjoyment within 1,000 feet of municipally, state or federally owned beaches, parks, or docking facilities. The Commissioner must also determine that the applicant has demonstrated that there is an available source of organisms to

be cultured for the lease site and that the lease will not result in an unreasonable impact from noise or lights at the boundaries of the lease site.

**Evidence Introduced Concerning the Nature  
and Impact of the Proposed Lease**

The evidentiary record before the Department regarding this lease application includes the Department file (Exhibit TISF1), including the application (Exhibit TISF2) and the Department site report (Exhibit TISF3), and the record of the August 4, 5 and 6, 2003 and January 12, 2004 public hearings<sup>1</sup>. At the public hearings, testimony was given by the applicant, Erick Swanson, the Department's Aquaculture Environmental Coordinator, Jon Lewis, the Department's Director of Ecology, John Sowles, Charlie Todd of the Maine Department of Inland Fisheries and Wildlife, David Manski of the National Park Service, Intervenor FOBHB, Intervenor CLF, Intervenor Eliot Paine, Intervenor Linda Paine, representatives of Maine Coast Heritage Trust (intervenor in the August 4, 2003 hearing for Acadia Aquaculture) and several members of the public.

Erick Swanson, the president of Trumpet Island Salmon Farm, (hereafter referred to as the applicant), provided written and oral testimony regarding his application. He testified that he currently operates an aquaculture lease adjacent to the proposed lease site and this application proposes to extend the existing lease site by 17.5 acres. The proposed extension is located west of the current lease site, toward Hardwood Island. The applicant stated that the reason for this application is to rotate the net pens to the 17.5-acre site in the summer months in order to be out of the view of the owners of Hardwood Island, Eliot and Linda Paine. The applicant has proposed to maintain his existing lease and operate on that site from October through May and then shift the pen system to the proposed extension area and operate on that site from June through September.

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<sup>1</sup> On August 4, 2003, the Department held a hearing on the application of Acadia Aquaculture for an aquaculture lease located east of Tinker Island in Blue Hill Bay. The president of Trumpet Island Salmon Farm, Erick Swanson, is also the president of Acadia Aquaculture. FOBHB and CLF intervened in both hearings. In order to avoid repetitious testimony at the August 5<sup>th</sup> hearing, the Department indicated that

According to the application and the testimony by the applicant, the proposed aquaculture lease is sought to raise Atlantic salmon using net pen culture techniques. The proposed lease activities would be conducted in the same manner as under the current lease located adjacent to the proposed lease site. Those lease activities consist of growing Atlantic salmon in a twelve-cage steel pen system. The structures on site would consist of the twelve-cage system with walkways, measuring 56 meters x 158 meters and a feeding barge. According to the applicant, he plans to replace the feeding barge on the existing site with a 90-ton, low profile feeding barge, called the Akva Master. The applicant testified that the cage system on the existing site would be moved as one unit, in one tide, pivoting off the north corner. There are other structures associated with the operations that are moored off-site and are used on the lease site, such as service barges, crew boats and a net roller. The applicant testified that he would grow one year class on the site, at a density of 28,000 fish per cage, or 336,000 fish. According to the applicant, the total amount of feed necessary for 336,000 fish is 1,864 metric tons, one-third of which is dispersed in the smolt year and the remaining two-thirds in the market year, with the majority of feed dispersed June through September. According to the application, all smolts would be obtained from Heritage Aquaculture, a Maine-certified hatchery. In response to questions, the applicant recognized that there were benthic impacts at the existing lease site, but stated that conditions were improving.

In accordance with Department regulations, Chapter 2.10(3), the applicant provided an environmental baseline of the proposed lease area. According to the baseline field survey submitted with the application, benthic sampling for infauna; sediment samples for granulometry; hydrographic measurements for current speed and direction at the surface, mid-depth and near bottom; profiles of temperature, salinity, dissolved oxygen and depths; and an underwater video recording were performed at the proposed lease site. The fieldwork took place on October 11, 2002.

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the record of the August 4<sup>th</sup> hearing would be made part of the record for decision for the Trumpet Island Salmon Farm lease decision.

The underwater video recording was performed using a drop camera. The recording began just south of the proposed cage system footprint and continued NNE through the center of the proposed site, ending just north of the proposed cage system footprint. Flora observed in the recording include a rare occurrence of kelp and an unidentified filamentous weed. Fauna observed include an abundance of rock crabs and sea stars; a common occurrence of burrowing anemones; an occasional occurrence of bulbous sponge, frilled anemone, and northern sea scallop; and a rare occurrence of blue mussel, waved whelk and flounder. The observed sea floor was generally gravel and cobble throughout with an occasional layer of soft silt. The granulometry data indicates sand in the northern portion of the proposed site and gravel in the southern portion. The current data collected over a seven-day period at three different depths indicated a surface speed of 1-15 cm/sec, mid-depth speed of 0-16 cm/sec, and bottom speed of 0-16 cm/sec. Profiles of temperature, salinity and dissolved oxygen were collected at the approximate center of the proposed site at depths ranging from .1 to 20.2 meters below surface. The temperature ranged from 13.9-13.5°C surface to bottom; salinity ranged from 31.7-31.8 ppt surface to bottom; and dissolved oxygen ranged from 101.1-91.8 % saturation from surface to bottom.

According to the application, the owners of Hardwood Island are the only riparian landowners within 1,000 feet of the proposed site. According to the applicant, there is no specific use of the proposed lease site by the riparian landowners. The landowners use the area south of the existing and proposed sites to access the island. According to the application, a limited amount of lobster fishing occurs along the shallow shelf immediately adjacent to Hardwood Island. Additionally, according to the applicant, boat traffic in the area consists of limited commercial lobster boats, recreational boats and kayaks. According to the application, the proposed lease site is located away from the main boat traffic.

The Department's Aquaculture Environmental Coordinator (AEC) and his assistant conducted a site visit at the proposed lease area on November 12, 2002. During the site visit, an underwater video camera was used to document the bottom characteristics and local flora

and fauna. The AEC created a site report summarizing the information obtained during the site visit and provided testimony regarding the site report at the public hearing. According to the report and the AEC's testimony, the proposed site is located approximately 100 feet east of Hardwood Island, in water depths ranging from approximately 79.37 feet at mean low water to 100.46 feet at mean high water. The bottom topography of the proposed lease site is relatively flat and is comprised of a thin mud layer over firmer bottom and covered with cobble and shell hash. According to the AEC's report, currents are tidally driven in a north/south direction along the shore of Hardwood Island. According to the AEC's report, the maximum mid-water current velocity at the proposed lease site is 16 cm./sec. The AEC noted in his report that the mid-depth currents at the adjacent lease site range between 15 and 25 cm/sec. He also noted that the adjacent site experienced increased bottom impacts in the form of bacterial mats and anoxic conditions. According to the AEC's report, shifting the pens will allow for increased fallowing and a lessened impact to the bottom. The AEC testified that the proposed lease site has a firmer bottom and shallower depths<sup>2</sup> than the existing lease site. According to the AEC, shallower depths could mean more impacts.

The AEC included hydrographic data obtained at the proposed lease site on September 11, 2001 in his report. According to the data collected, dissolved oxygen concentration ranged from 86.3% - 104.6%, surface to bottom temperatures ranged from 50.03–60.05 °F, salinity ranged from 30.63-32.18 ppt and pH ranged from 7.90–8.08. Local flora and fauna observed at the proposed lease site include sand shrimp, sea stars, crabs, frilled anemones and cockle shells. Additionally, according to the report, there is an eagle nest located within ¼ mile of the proposed lease site, on Hardwood Island.

According to the AEC, the only moorings observed within the boundaries of the proposed lease area during the site visit belong to the applicant. The nearest dock is located 980 feet to the south of the proposed lease site. According to the AEC, the proposed activities will not unreasonably interfere with access to the dock. Additionally, according to the AEC, the

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<sup>2</sup> Water depths at the existing lease site range from 99 feet to 210 feet at mean low water.

proposed activities will not interfere with navigation in the area. According to the AEC, little vessel traffic is observed between the existing lease site and Hardwood Island. Additionally, according to the AEC's report, the Tremont harbormaster stated that the proposed activities would not interfere with navigation or riparian property access.

According to the AEC's report, no fishing activity was observed within the boundaries of the proposed lease site during the site visit. The AEC recognized that the site visit occurred at a time when lobster traps would likely be moved to deeper waters. However, based upon his previous visits to the existing lease site, he stated that lobster and scallop fishing is expected to the north, south and east of the existing and proposed lease sites. According to the AEC, the proposed lease is not expected to further displace fishing activity in the area. Aside from the adjacent lease site, the nearest aquaculture lease site is located 2.2 miles northwest of the proposed lease site.

Charlie Todd, a biologist from the Maine Department of Inland Fisheries and Wildlife (IF&W), provided testimony regarding the proposed lease site. He testified that the proposed lease site is located within ¼ mile of an eagles nest on Hardwood Island, and thus within an Essential Habitat. Therefore, he testified, the lease would need IF&W approval. According to Mr. Todd, IF&W would review the proposal to determine whether the project would result in a significant alteration of habitat for the nesting bald eagles on Hardwood Island. He testified that the eagles have been observed on Hardwood Island since 1995 and are monitored by 2-3 overflights per year. The Hardwood Island eagles are loyal to their nest and have a 44% success rate. He testified, however, that in the spring of 2003, the nest was unsuccessful. Mr. Todd testified that the proposed lease would be a potential significant alteration to the eagles' habitat.

The Department also received written correspondence from Assistant Regional Biologist Scott Lindsay of IF&W regarding the proposed lease site. Mr. Lindsay stated that the proposed lease site would constitute unreasonable disturbance to the nesting pair of eagles on Hardwood Island. He stated that further encroachment toward the nest and use of the waters between the existing site and the shore of Hardwood Island would likely compromise the nesting efforts of

the pair of eagles. He further stated that he does not believe that the proposed lease site is a viable option within the nesting season given its proximity to the nest, the lack of adequate buffering, and the failure of last year's reproductive effort at the site.

Eric Nelson, a biologist with the U.S. Environmental Protection Agency, provided written comments regarding the proposed lease. Mr. Nelson stated that benthic impacts have occurred at the applicant's existing lease despite favorable water depth and current velocities at the site. According to Mr. Nelson, due to shallower waters and weaker current velocities relative to the existing site, the proposed site may be even more susceptible to benthic degradation.

Donald Eley, the president of FOBHB, provided written and oral testimony regarding the proposed lease. Mr. Eley testified that by moving operations closer to shore, to shallower water with lower current velocity, at a time of year when dissolved oxygen levels are at their lowest and feeding levels at their highest, the proposed lease activities will barely give the existing site any recovery time and will cause damage to the new site. He also testified that because the applicant's operations at the existing site have been substantially injurious to the water quality, benthic conditions and marine organisms, the applicant should not be able to expand the lease site until he demonstrates that he can operate the existing lease site without having unacceptable impacts. He further stated that the location of the proposed site is so close to shore that it would be impossible for any commercial fishing or recreational boating to take place in the area. Mr. Eley testified that the proposed lease will likely have an adverse impact on a nesting pair of bald eagles on Hardwood Island because operations would move closer to shore and thus closer to the nest.

Intervenor CLF, represented by Roger Fleming, provided written and oral testimony regarding the proposed lease. Mr. Fleming testified that the proposed lease will unreasonably interfere with ecologically significant flora and fauna due to the location of the site in shallower waters with weaker currents and movement of operations closer to the eagles' nest. He testified that the proposed lease will increase the existing adverse impact to fishing and navigation by removing the buffer between the island and the salmon farm. According to Mr. Fleming, the

applicant's operating history at the existing site demonstrates a lack of capability to carry out the proposed project.

Intervenors Eliot and Linda Paine provided written and oral testimony regarding the proposed lease. They testified that they have owned Hardwood Island since 1968. They requested that the proposed lease extension be granted so that the farm is out of their view and there will be less noise.

In addition, several members of the public testified in opposition to salmon farming in Blue Hill Bay. The Department also received numerous letters from members of the public opposing the proposed lease.

### **Findings of Fact**

The proposed lease site is located approximately 100 feet from Hardwood Island, adjacent to an existing lease site. Water depths in the proposed lease site range from approximately 79.37 feet at mean low water to 100.46 feet at mean high water. The maximum mid-water current velocity at the proposed lease site is 16 cm./sec. In comparison, the mid-depth currents at the existing adjacent lease site range between 15 and 25 cm/sec and water depths range from approximately 99 to 210 feet at mean low water. The existing lease site has experienced increased bottom impacts in the form of bacterial mats and anoxic conditions in an area with deeper water depths and higher currents than the proposed extension area. The proposed lease site, with slower currents and shallower water depths may be more susceptible to increased benthic impacts, particularly when the fish would be on the site during the summer months, when the feeding level is highest. Based on this information, I find that the proposed lease does not satisfy the statutory requirement that there be no unreasonable interference with the ability of the site and surrounding marine and upland areas to support ecologically significant flora and fauna.

The proposed lease site is located within ¼ mile of an eagles nest on Hardwood Island, and therefore within an Essential Wildlife Habitat. Any new lease granted within such an area must be reviewed and approved by IF&W. In making its determination, IF&W considers



whether the project would result in a significant alteration of habitat for the nesting bald eagles on Hardwood Island. In the spring of 2003, the nest on Hardwood Island was unsuccessful. Moving the lease operations closer to the nest would likely result in a significant alteration of habitat for the eagles and would interfere with their nesting efforts. Based on the evidence in the record, I find that the proposed activities will unreasonably interfere with significant wildlife habitat.

### **Conclusions of Law**

Based on the above findings, I conclude that the proposed project does not meet the requirements for the granting of an aquaculture lease set forth in 12 M.R.S.A. §6072 (7-A).

### **Decision**

Based on the foregoing, the Commissioner denies the applicant's requested aquaculture lease of 17.5 acres.

Dated: \_\_\_\_\_

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George D. Lapointe (Commissioner)  
Department of Marine Resources